(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
4 September 2003 (04.09.2003)

PCT

(10) International Publication Number
WO 03/073143 A1

(51) International Patent Classification[7]: G02B 6/255

(21) International Application Number: PCT/SE03/00324

(22) International Filing Date: 26 February 2003 (26.02.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0200569-2 26 February 2002 (26.02.2002) SE

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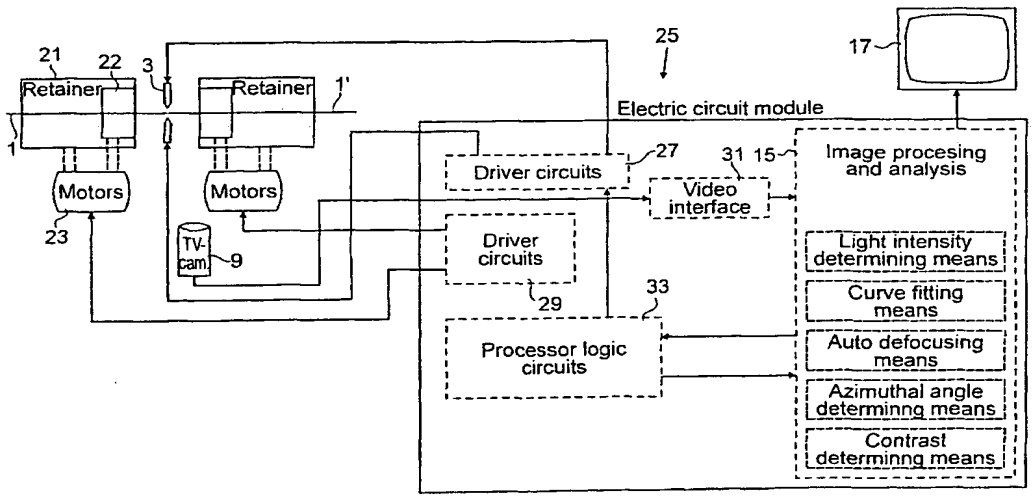
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PM FIBER ALIGNMENT



(57) Abstract: The polarization axes of the ends of two PM fibers are aligned in an automatic fiber splicer by first making a linear alignment of the fiber ends (1, 1') using movable retainers (21) the same way as for conventional splicing. The fiber ends are rotated by rotatable fixtures (22) to capture images by a camera (9) and therefrom, in an image processing and analysis unit (15), as controlled by logical circuits (33) light contrast profiles are determined as functions of the angular position. From the light contrast profiles the polarization axes are determined and then they are aligned with each other. The images are captured of an area at and around the fiber ends as seen in an observation plane. This observation plane is taken to have such a position that the variation of the light contrast profiles is sufficiently large, this making the determination of the angular positions of the polarization axes have a sufficient accuracy, also for for example elliptical core fibers.

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